

[10191/3699]

**REPLY UNDER 37 C.F.R. § 1.116  
EXPEDITED PROCEDURE  
GROUP ART UNIT 3752**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventor(s) : Frank MILLER et al.  
Serial No. : 10/534,331  
Filed : March 20, 2006  
For : ATOMIZATION SYSTEM  
Examiner : Darren Gorman  
Art Unit : 3752  
Confirmation No. : 9783

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I hereby certify that this correspondence is electronically transmitted  
to the USPTO via the Office of electronic filing system on:  
Date: February 11, 2010  
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Kevin Kambo

**REPLY UNDER 37 C.F.R. § 1.116**

S I R:

In response to the Final Office Action of December 11, 2009, whose two-month response date is February 11, 2010, kindly amend the above-captioned application without prejudice as follows:

**Amendments to the Claims** are reflected in the listing of claims, which begins on page 2 of this paper.

**Remarks** begin on page 4 of this paper.

While no fees are believed to be due, the Commissioner is authorized, as appropriate and/or necessary, to charge any fees or credit any overpayment to **Deposit Account No. 11-0600.**

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in this application:

## **LISTING OF CLAIMS:**

Claims 1 to 13. (Canceled).

14. (Currently Amended) An atomization system for a fuel, comprising:  
a fuel injector;

an atomization tube including at least a first section and a second section, the first section having at least one of an outer diameter and a wall thickness that is different than that of the second section;

an air inlet; and

at least one metering aperture;

wherein the second section is formed at a downstream side of the first section;

wherein the second section includes a plurality of bore holes at each of a plurality of positions on an outer wall of the atomization tube, along a length of the atomization tube; ~~and~~

wherein diameters of the bore holes at each position on the outer wall of the atomization tube along the length of the atomization tube increase in a downstream direction;

wherein the second section is divided into multiple subsections; and

wherein the outer diameter of the atomization tube is greater in a first one of the subsections than in a second one of the subsections.

15. (Previously Presented) The atomization system as recited in Claim 14, wherein:

the atomization system is for charging a chemical reformer in order to obtain hydrogen.

Claims 16 to 20. (Canceled).

21. (Currently Amended) The atomization system as recited in Claim ~~20~~ 14, wherein:

the second of the subsections coincides with a respective position.

22. (Previously Presented) The atomization system as recited in Claim 21, wherein:

a plurality of bore holes are formed in the second of the subsections.

Claims 23 to 24. (Canceled).

25. (Previously Presented) The atomization system as recited in Claim 14, wherein:

an outer shaping of the atomization tube is achieved by one of turning on a lathe, grinding, and erosive machining.

26. (Previously Presented) The atomization system as recited in Claim 14, wherein:

a diameter of the bore holes is approximately 100  $\mu\text{m}$  to 250  $\mu\text{m}$ .

27. (Previously Presented) The atomization system as recited in Claim 26, wherein:

a ratio between a diameter and a length of the bore holes is at least equal to 1.